



# UNITED STATES PATENT AND TRADEMARK OFFICE

mk

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,861	02/07/2005	Ichiro Okamoto	450100-05043	1879

7590 03/07/2007  
William S Frommer  
Frommer Lawrence & Haug  
745 Fifth Avenue  
New York, NY 10151

EXAMINER
----------

ELCENKO, ERIC J

ART UNIT	PAPER NUMBER
----------	--------------

2617

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/07/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/523,861

Applicant(s)

OKAMOTO, ICHIRO

Examiner

Eric Elcenko

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over KO (U.S. Pub. No. 2002/0052228) in view of Song (U.S. Pat. No. 6,373,397) in view of Kfoury (U.S. Pat. No. 6,549,789) in view of Lim (U.S. Pat. No. 6,628,974)

Regarding claim 10, Ko discloses an electronic device, comprising: a rotary operating unit that is freely rotatable (reads on the closing motor rotates clockwise or counter clockwise according to the operation control of motor driving unit) (paragraph [0025])

an active element (i.e. sensors) for detecting rotation said rotary operation unit, and (the open and close sensors detect when the body is in an open or closed position and then outputs a detection signal to the control unit) ( paragraph [0025]), and

control means for controlling power supply to said active element (it is inherent that power is also being supplied to the sensors (the reference discloses a control unit controls the overall control of the portable radio terminals and power is supplied to the control unit and each circuit portion according to the switching on/off of the power key)) (paragraphs [0023] and [0031]).

Ko fails to disclose the electronic device has three operation modes and said control means controls the power supply to said active element depending on said modes.

In a similar field of endeavor, Song discloses the electronic device has three operation modes (when the flip cover is closed the CPU outputs a high signal (this turns on the first back light) however the flip switch outputs a low signal (causing the second light not to turn on) and the stand by time for this reference is considered to be when the user pushes the function selection key at the state when the flip cover is closed) (col. 4 lines 21-30) and

said control means controls the power supply to said active element depending on said modes (when the flip cover is closed the CPU outputs a high signal (this turns on the first back light) however the flip switch outputs a low signal (causing the second light not to turn on) and the stand by time for this reference is considered to be when the user pushes the function selection key at the state when the flip cover is closed) (col. 4 lines 21-30).

At the time of invention it would have been obvious to one of ordinary skill in the art to further modify Ko to include the electronic device has three operation modes and said control means controls the power supply to said active element depending on said modes. Motivation for this modification would have been to reduce unnecessary power consumption.

The combination of Ko and Song do not disclose a freely rotating unit.

Kfoury discloses the housing portions of the device are coupled end to end by a swivel hinge 214 depicted in Figs 3 and 4. The swivel hinge allows the two housing portions to rotate freely in two axis of movement allowing free range of the openable closable device. It can close the two housings in a clam type fashion rotating about a first axis 302 the swivel hinge 214. This first axis allows the second housing portion 204 to rotate from a closed position to an open position. A second axis 304 of the swivel hinge 214 allows the first housing portion 202 to advantageously rotate relative to the second housing portion. (Col 4, Ln 53 – Col 5, Ln 45)

It would have been obvious to one of ordinary skill in the art to modify the combination to include the teachings as it provides a coupling allowing multiple interfaces on the device and multiple different orientations for multiple configurations to be implemented.

The combination including Kfoury does not disclose having pulse signals having a phase difference depending on the rotation of the unit.

Lim discloses he position detecting section 50 includes position detectors 51 and 52 installed on the positions of the power transferring section 20 and the rotating section 10 to face each other, and these position detectors 51 and 52 obtain the same-phase information and apply a specified control signal to the driving section 11. Lim also discloses a folder operating apparatus for a cellular phone, which can stably open, and close a folder by compensating for the phase difference caused by the instability and the load of the folder operating apparatus by controlling the position of the folder. (Col 6, Ln 40-65)

It would have been obvious to one of ordinary skill in the art to modify the combination to include the teachings of Lim in order to a smoother and more effective transition for the unit to rotate from one position to another.

Regarding claim 11, the combination discloses an electronic device according to claim 10. Ko further discloses said control means controls the power supply to one of said first and second active elements in at least one of said three modes (it is inherent that power is also being supplied to the sensors (the reference discloses a control unit controls the overall control of the portable radio terminals and power is supplied to the control unit and each circuit portion according to the switching on/off of the power key)) (paragraphs [0023] and [0031]).

Ko fails to disclose wherein said active element includes a first and second active elements.

Song discloses said active element includes a first (i.e. first back light) and second active elements (i.e. second back light) (col. 3 lines 60-66).

At the time of invention it would have been obvious to one of ordinary skill in the art to further modify Ko to include said active element includes a first and second active elements. Motivation for this modification would have been to reduce unnecessary power Consumption.

Regarding claim 12, the combination discloses an electronic device according to claim 11. Song further discloses further comprising:

first and second power-supply control means for switching on and off the power supplied to each of said first and second active elements (the first back light depends on the signal from the CPU and the second back light depends on the signal coming from the flip switch (if the signal coming from the CPU is high the second light will not light up the key pad unless the signal from the flip switch is high)) (col. 4 lines 21-30), wherein

said control means makes said first and second power-supply control means on in a normal use mode (if the CPU outputs a high signal and the flip switch sends a high signal (flip cover is open), both the first and second lights are on) (col. 4 lines 21-30), and makes said first power-supply control means on (when the flip cover is closed the CPU outputs a high signal (this turns on the first back light) however the flip switch outputs a low signal (causing the second light not to turn on)) (col. 4 lines 21-25) and said second power-supply control means off in a first stand-by mode (the stand by time for this reference is considered to be when the user pushes the function selection key at the state when the flip cover is closed) (col. 4 lines 21-26).

At the time of invention it would have been obvious to one of ordinary skill in the art to further modify Ko to include said active element includes a first and second active elements, first and second switching means switching on and the power supplied each of said first and second active elements are provided, and said control means turns on said first and second switching means an normal use time, and turns on said first and turns off said second switching means in a switching means first stand-by time. Motivation for this modification would have been to reduce unnecessary power consumption.

Regarding claim 13, the combination discloses an electronic device according to claim 12. Song further discloses wherein

said control means further makes said first and second power-supply control means off in a second stand-by mode where key operation setting is forbidden (reads on the first and second back lights are not driven if the flip cover is close and the function selection key is not input (this is considered to be the second stand by time)) (col.4 lines 30-35).

At the time of invention it would have been obvious to one of ordinary skill in the art to further modify Ko to include said control means further makes said first and second power-supply control means off in a second stand-by mode where key operation setting is forbidden. Motivation for this modification would have been to reduce unnecessary power consumption.

Regarding claim 14, the combination discloses an electronic device according to claim 12. Song further discloses further comprising:

pulse-detecting means for detecting a pulse signal transmitted from the first active element in response to rotation of said rotary operating unit to generate an interrupt signal (when the flip cover is open the flip switch sends a signal to the CPU which sends a signal to turn on the first back light, that same signal is sent (considered the interrupt) to the AND gate (the AND gate also has a high signal coming from the flip switch because the flip is open) causing the AND gate to output a high signal and turn the second back light on) (col. 4 lines 20-30 and Figure 3), wherein



Art Unit: 2617

said control means makes said second power-supply control means on by the interrupt signal from said pulse-detecting means when said rotary operating unit is operated to rotate in said first stand-by mode (when the flip cover is open the flip switch sends a signal to the CPU which sends a signal to turn on the first back light, that same signal is sent (considered the interrupt) to the AND gate (the AND gate also has a high signal coming from the flip switch because the flip is open) causing the AND gate to output a high Signal and turn the second back light on) (col. 4 lines 20-30 and Figure 3).

At the time of invention it would have been obvious to one of ordinary skill in the art to further modify Ko to include pulse-detecting means for detecting a pulse signal transmitted from the first active element in response to rotation of said rotary operating unit to generate an interrupt signal, wherein said control means makes said second power-supply control means on by the interrupt signal from said pulse-detecting means when said rotary operating unit is operated to rotate in said first standby mode. Motivation for this modification would have been to reduce unnecessary power consumption.

Regarding claim 15, the combination discloses an electronic device according to claim 14. Song further discloses wherein

said control means makes said first power-supply control means or both of the first and second power-supply control means on, when key operation forbidden setting is released in said second stand-by mode (if the user pushes the function key but the flip cover is open both the first and the second back lights are on) (col. 4 lines 19-30, figure 2).

At the time of invention it would have been obvious to one of ordinary skill in the art to further modify Ko to include said control means makes said first power-supply control means or both of the first and second power-supply control means on, when key operation forbidden setting is released in said second stand-by mode. Motivation for this modification would have been to reduce unnecessary power consumption.

Regarding claim 16, the combination discloses an electronic device according to claim 11. Ko further discloses further comprising:

power-supply control means for switching on and off the power supply to said second active element (power is supplied to the control unit and each circuit portion according to the switching on/off of the power key (paragraphs [0031]), wherein

said control means makes said power-supply control means on in a normal use mode (reads on the control unit controls the first switch closed the second switch open in the powered on state of the terminal) (paragraph [0029]).

Ko fails to disclose said control means makes said power-supply control means off in a stand-by mode.

Song discloses wherein said control means turns off said power-supply-control means in a stand-by time (reads on the first and second back lights are not driven if the flip cover is close and the function selection key is not input (this is considered to be the second stand by time)) (co1.4 lines 30-35).

At the time of invention it would have been obvious to one of ordinary skill in the art to further modify Ko to include wherein said control means turns off said power-

supply-control means in a stand-by time. Motivation for this modification would have been to reduce unnecessary power consumption.

Regarding claim 17, the combination discloses an electronic device according to claim 16. Song further discloses further comprising:

pulse-detecting means for detecting a pulse signal transmitted from the first active element in response to rotary operation of said rotary operating unit to generate an interrupt signal (when the flip cover is open the flip switch sends a signal to the CPU which sends a signal to turn on the first back light, that same signal is sent (considered the interrupt) to the AND gate (the AND gate also has a high signal coming from the flip switch because the flip is open) causing the AND gate to output a high signal and turn the second back light on) (col. 4 lines 20-30 and Figure 3), wherein

said control means makes said power-supply control means on by the interrupt signal from said pulse-detecting means, when said rotary operating unit is operated to rotate in said stand-by mode (when the flip cover is open the flip switch sends a signal to the CPU which sends a signal to turn on the first back light, that same signal is sent (considered the interrupt) to the AND gate (the AND gate also has a high signal coming from the flip switch because the flip is open) causing the AND gate to output a high signal and turn the second back light on) (col. 4 lines 20-30 and Figure 3).

At the time of invention it would have been obvious to one of ordinary skill in the art to further modify Ko to include pulse-detecting means for detecting a pulse signal transmitted from the first active element in response to rotary operation of said rotary operating unit to generate an interrupt signal, wherein said control means makes said

Art Unit: 2617

power-supply control means on by the interrupt signal from said pulse-detecting means, when said rotary operating unit is operated to rotate in said stand-by mode. Motivation for this modification would have been to reduce unnecessary power consumption.

Regarding claim 18, the combination discloses an electronic device according to claim 12. Ko further discloses wherein

said electronic device has a structure in which a first casing and a second casing are connected to be capable of being opened and closed (reads on a portable terminal in which a sub-body can be opened from or closed onto a main body) (paragraph 0020)), and

Ko fails to disclose said control means shifts to the second stand-by mode and makes said first and second power-supply control means off when said casings are closed, and shifts to the normal use mode and makes said first and second power-supply control means on when said casings are opened.

Song discloses said control means shifts to the second stand-by mode and makes said first and second power-supply control means off when said casings are closed (if the flip cover is closed a voltage difference is calculated and applied to the CPU) (col. 5 lines 4-56), and shifts to the normal use mode and makes said first and second power-supply control means on when said casings are opened (reads on if the flip cover is open the voltage difference is no generated) (col. 5 lines 65-67 and col. 6 lines 1-5).

At the time of invention it would have been obvious to one of ordinary skill in the art to further modify Ko to include said control means shifts to the second stand-by

Art Unit: 2617

mode and makes said first and second power-supply control means off when said casings are closed, and shifts to the normal use mode and makes said first and second power-supply control means on when said casings are opened. Motivation for this modification would have been to reduce unnecessary power consumption.

Regarding claim 19, the combination discloses an electronic device according to claim 11. Song further discloses further comprising:

a third power-supply control means for switching on and off power supply to a backlight for lighting display means (if the flip is closed and the function key is not selected then the first and second back lights are not driven) (col. 4 lines 30-35), wherein

said control means makes said first power-supply control means on and makes said second and third power-supply control means off, when shifted from said normal use mode to said first stand-by mode (driving only the first backlight if the function selection key is selected and the flip cover is close (this suggests a standby mode because power is still being supplied but the phone is not in use)) (col. 4 lines 45-60).

At the time of invention it would have been obvious to one of ordinary skill in the art to further modify Ko to include a third power-supply control means for switching on and off power supply to a backlight for lighting display means, wherein said control means makes said first power-supply control means on and makes said second and third power-supply control means off, when shifted from said normal use mode to said first stand-by mode. Motivation for this modification would have been to reduce unnecessary power consumption.

***Response to Arguments***

3. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Elcenko whose telephone number is (571) 272-8066. The examiner can normally be reached on M-F 7:30 AM through 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on (571) 272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ee

  
DUC M. NGUYEN  
SUPERVISORY PRIMARY EXAMINER  
TECHNOLOGY CENTER 2600